

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)  
BSc DEGREE EXAMINATION MAY 2018  
(Third Semester)

Branch- ZOOLOGY

CHEMISTRY-1

Time , Three Hours

Maximum i 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10x2 = 20)

- 1 Define the terms orbit and orbital.
- 2 Write a short note on oxidizing agents with example.
- 3 What are alkaloids? Give an example
- 4 What is isoprene rule? Give an example.
- 5 What are sulphha drugs? Mention its uses.
- 6 What are auxochrome? Give examples.
- 7 Define molecularity.
- 8 What is mean by auto catalysis.' Give an example.
- 9 Define the terms BOD and COD,
- 10 What are insecticides? Give an example.

SECTION - B 125 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5x5= 25)

- 11 a With diagrams explain shapes of S. P and d orbitals.  
OR  
b Give the structures of the follow ing molecules : i)  $\text{PCl}_5$  (ii)  $\text{IF}_7$
- 12 a Discuss the preparation and properties of benzene.  
OR  
b Explain the preparation and uses of teflon.
- 13 a Discuss about analgesics and antipvretics.  
OR  
b Give the preparation and uses of methyl orange.
- 14 a Derive the expression of rate constant for first order reaction.  
OR  
b Illustrate the types of catalysis.
- 15 a What is acid rain? Flow is it caused ? What are its bad effects on the environment?  
OR  
b What are the factors which affecting soil pollution?

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3 x 10 = 30)

- 16 a Explain the following : a) Aufbau Principle (b) Pauli's exclusion principle.

b Explain the geometry of  $\text{BF}_3$ . Sly, and  $\text{IF}_6$ .

(6+4)

17 a Discuss the preparation and uses of coniine.

b Write the preparation and uses of polyethylene. (6+4)

18 a What are antibiotics? Give two examples. How are they useful?

b What are dyes? How are they classified on the basis of chemical structure? Explain. (4+6)

19 a Write notes on : i) Pseudo unimolecular reaction (ii) Parallel reaction

b Explain the mechanism of enzyme catalysis. (6+4)

20 a Explain the following terms :

i) Air pollution ii) Global warming

b Write notes on water pollution. (6+4)

Z-Z-Z

END